**SNC2P – Grade 10 Applied General Science** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chemistry: STSE Assignment**  Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The **Young Worker Awareness Program** (YWAP) has decided to run an INFO fair for grade 9 students educating them about the chemicals used in the workplace.

They are **currently hiring** people to **investigate** different **careers** and to **assess** the **hazards** associated with the **handling** and **disposing** of chemicals in terms of its impact on **human health** and the **environment**.

YWAP is **interested in hiring YOU**   
because of your knowledge in chemistry.

|  |  |  |  |
| --- | --- | --- | --- |
| **CHECKLIST 🗹** | | | **Teacher Initial** |
| ❑ | **Orientation** | Date: |  |
| ❑ | **Quiz** | Date: |  |
| ❑ | **Choose a Career** | Due date: |  |
| ❑ | **Research Workshop** | Date: |  |
| ❑ | **General Information on Career** | Due date: |  |
| ❑ | **Useful Applications of Chemical Reactions** | Due date: |  |
| ❑ | **Assessing the Chemical Hazards** | Due date: |  |
| ❑ | **Recommendation** | Due date: |  |
| ❑ | **Public service announcement** | Due date: |  |
| ❑ | **Info fair** | Date: |  |
| ❑ | **Learning about other careers** | Due date: |  |

**SNC2P – Grade 10 Applied General Science** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Quiz**  Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Match the WHMIS symbols with the definitions below. There is only one best answer for each definition (but some symbols are used more than once). Write the letter of the correct answer in the box beside each definition.



|  |  |  |
| --- | --- | --- |
| 1. | This material could kill you if it is swallowed, inhaled, or absorbed through the skin. |  |
| 2. | Chemicals in this division won't kill you immediately, but could cause such unwelcome effects as birth defects in your children or liver damage. |  |
| 3. | The fact that most aerosol cans have propellants that can be ignited easily means that this symbol should be on their labels. |  |
| 4. | Industrial cleaners containing sodium hydroxide, a very corrosive base, should have this symbol on their label. |  |
| 5. | Heating or dropping could cause these cylinders of pressurized gases to explode. |  |
| 6. | Some chemicals bearing this symbol could undergo a dangerous reaction if they come in contact with water. |  |
| 7. | Blood samples that have been contaminated by Hepatitis B viruses should be tagged with this symbol. |  |
| 8. | Since it poses such a fire hazard, a bottle of methanol would have this symbol on its label. |  |
| 9. | A chemical that causes cancer after prolonged and repeated exposure would get this symbol on its label. |  |
| 10. | By releasing oxygen, can cause a flammable material to burn more easily. |  |

1. Identify the type of chemical reaction each chemical equation is showing.

|  |  |
| --- | --- |
| **Chemical Equations** | **Type of Chemical Reaction** |
| HgO → Hg + O2 | S D SD DD |
| K + HOH → KOH + H2 | S D SD DD |
| Ba + P4 → Ba3P2 | S D SD DD |
| copper chloride + zinc → zinc chloride + copper | S D SD DD |
| lead + bromine → lead bromide | S D SD DD |
| sodium sulfide + barium hydroxide  → sodium hydroxide + barium sulfide | S D SD DD |

|  |
| --- |
| The four main types of chemical reactions: Synthesis (S) Decomposition (D) Single Displacement (SD) Double Displacement (DD) |

**SNC2P – Grade 10 Applied General Science** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Answer Key for Quiz**  Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Match the WHMIS symbols with the definitions below. There is only one best answer for each definition (but some symbols are used more than once). Write the letter of the correct answer in the box beside each definition.



|  |  |  |
| --- | --- | --- |
| 1. | This material could kill you if it is swallowed, inhaled, or absorbed through the skin. | **F** |
| 2. | Chemicals in this division won't kill you immediately, but could cause such unwelcome effects as birth defects in your children or liver damage. | **C** |
| 3. | The fact that most aerosol cans have propellants that can be ignited easily means that this symbol should be on their labels. | **E** |
| 4. | Industrial cleaners containing sodium hydroxide, a very corrosive base, should have this symbol on their label. | **D** |
| 5. | Heating or dropping could cause these cylinders of pressurized gases to explode. | **B** |
| 6. | Some chemicals bearing this symbol could undergo a dangerous reaction if they come in contact with water. | **H** |
| 7. | Blood samples that have been contaminated by Hepatitis B viruses should be tagged with this symbol. | **A** |
| 8. | Since it poses such a fire hazard, a bottle of methanol would have this symbol on its label. | **E** |
| 9. | A chemical that causes cancer after prolonged and repeated exposure would get this symbol on its label. | **C** |
| 10. | By releasing oxygen, can cause a flammable material to burn more easily. | **G** |

1. Identify the type of chemical reaction each chemical equation is showing.

|  |  |
| --- | --- |
| **Chemical Equations** | **Type of Chemical Reaction** |
| HgO → Hg + O2 | S D SD DD |
| K + HOH → KOH + H2 | S D SD DD |
| Ba + P4 → Ba3P2 | S D SD DD |
| copper chloride + zinc → zinc chloride + copper | S D SD DD |
| lead + bromine → lead bromide | S D SD DD |
| sodium sulfide + barium hydroxide  → sodium hydroxide + barium sulfide | S D SD DD |

|  |
| --- |
| The four main types of chemical reactions: Synthesis (S) Decomposition (D) Single Displacement (SD) Double Displacement (DD) |